REMARKS

Applicants respectfully request reconsideration and allowance for the above-identified application.[1] By this paper, claims 30-35, 37-39, 43-45, and 47-59 are pending,[2] wherein claim 30 has been amended,[3] claims 22-29 and 40-42 have been cancelled, and claims 59 and 60 are new.

Initially, Applicants note with appreciation the Examiner's withdrawal of the previous grounds of rejection. Further, Applicants note with appreciation the Examiner's consideration of the documents submitted with the Information Disclosure Statement (IDS) filed January 31, 2005.

Applicants kindly note, however, that the Patent Office has not acknowledged consideration of the documents submitted with the Supplemental IDS filed on April 26, 2005. Accordingly, submitted herewith is another copy of the PTO Form-1449 submitted with the Supplemental IDS filed on April 26, 2005. Applicants respectfully request that the Examiner consider the documents listed on the attached PTO Form-1449 and acknowledge such consideration by returning an initialed copy of the attached form with the next communication from the Patent Office.

In the first paragraph, the Office Action states that Applicants' argument in a previous response filed April 7, 2004 with regards to the U.S. Patent No. 6,292,834 to Ravi ("*Ravi*") (commonly assigned to Microsoft), are noted but do not conform with MPEP 706.02(L)(2)II. In order to address the Examiner's concerns, Applicants hereby make the following statement of common ownership for the *Ravi* patent. *Ravi* cannot be used to support an obviousness type rejection under 35 U.S.C. §103(a), inasmuch as *Ravi* qualifies as prior art only under 35 U.S.C. §102(e) and at the time the invention of U.S. Application Serial No. 09/770,765 was made, U.S.

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[1] Applicants also note for the record that this case is part of a family of cases including the following application serial numbers: 09/770,769; 09/770,644; 09/770,767; 09/770,765; 09/770,766; 10/975,693; 10/976,063; 09/744,771; and 09/744,662. In order to preserve any and all rights available to Applicants, Applicants will not provide a terminal disclaimer with reference to any of the aforementioned cases at this time. Nevertheless, one or more terminal disclaimers may be provided in the future if the Examiner deems it necessary.

[2] Applicants respectfully note that the Office Action states claims 30-35, 37-39, 43-58 are pending; however, claim 46 has been canceled in a previous amendment. Accordingly, Applicants will respond to the Office Action as if claim 46 where not included in the pending claims.

[3] Applicants respectfully note that claim 30 has been amended to clarify various elements and correct some typographical errors. Support for the amendments can be found throughout the specification and in particular in those sections noted in Amendment "C" filed December 20, 2004 as discussed with the Examiner during an Interview dated November 16, 2004.

Patent No. 6,292,834 (*Ravi*) and Application 09/770,765 were commonly owned by Microsoft Corporation. Because Applicants believe that such statement conforms to the above cited section of the MPEP, Applicants respectfully request withdrawal of the previous ground(s) of rejection from the Office Action dated January 20, 2004.

In the fifth paragraph, the Office Action rejects independent claim 30 under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,044,396 to Adams ("*Adams*"), in view of U.S. Patent No. 6,292,834 to Ito et al. ("*Ito*"), U.S. Patent No. 5,822,524 to Chen et al. ("*Chen*"), and U.S. Patent No. 6,243,388 to Mussman et al. ("*Mussman*"). The Office Action rejects the remaining dependent claims under 35 U.S.C. §103(a) as allegedly being unpatentable over various combinations of *Adams*, *Ito*, *Chen*, *Mussman*, and further in view of one or more of U.S. Patent No. 6,215,904 to Lavalle ("*Lavalle*") and U.S. Patent No. 6,721,455 to Gourdol ("*Gourdol*").[4] Applicants respectfully traverse these grounds of rejections.

Applicants' invention, as recited for example in independent method claim 30 relates to bandwidth allocation for transmitting video on a cable network. The recited method includes: identifying compression parameters to be used to compress the data that is received from the plurality of data sources to a desired depth of compression, the selection of compression parameters being based on a function of types of data to be displayed and a function of client capabilities; associating the compression parameters with a set of values and threshold ranges for degrading image quality based on the types of data and a customer identifier; receiving the data from the plurality of data sources; differentially converting said data sources into compressed video streams, responsive to an instantaneous resource restriction and based at least in part on the types of data; and multiplexing said compressed video streams on a single transmission line.

In order to establish a *prima facie* case of obviousness, "the prior art reference (or references when combined) must teach or suggest all the claim limitations." MPEP § 2143 (emphasis added). In addition, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. During examination, the pending claims are given their broadest reasonable interpretation, i.e., they are interpreted as broadly as

[4]Although the prior art status of the cited art is not being challenged at this time, Applicants reserve the right to do so in the future. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status or asserted teachings of the cited art.

their terms reasonably allow, consistent with the specification. MPEP §§ 2111 & 2111.01. MPEP § 2141.02 also states that the cited references must be considered as a whole, including those sections that "teach away" from the claimed invention. (Citation omitted).

Applicants respectfully submit that the Office Action has not established a *prima facie* case of obviousness for at least the reasons that the cited art does not disclose or suggest each and every element of claim 30 and there is improper motivation to combine reference teachings. With regard to the issue of disclosing or suggesting each and every element of claim 30, Applicants respectfully submit that the combination of *Adams*, *Ito*, *Chen*, *Mussman* does not disclose or suggest the selection of compression parameters—for compressing data to a desired depth—based on a function of types of data to be displayed and a function of client capabilities; associating the compression parameters with a set of values and threshold ranges for degrading image quality based on the types of data and the client capabilities; and degrading the image quality based on the types of data and the client capabilities for differentially converting said data into compressed video streams responsive to an instantaneous resource restriction, as recited, *inter alia*, in claim 30.[5]

Adams discloses utilizing available bit rate in a constrained variable bit rate channel. *Adams* utilizes a standard encoder for outputting compressed data at a variable bit rate based on a threshold value for buffer fullness. As acknowledged by the Office Action, however, *Adams* does not disclose or suggest "differentially converting the data to a desired depth of compression based on a function of the types of data and for degrading image quality based on the types of data." As such, *Adams* cannot possibly disclose or suggest degrading the image quality based on the types of data and the client capabilities for differentially converting said data into compressed video streams responsive to an instantaneous resource restriction. Recognizing some of the deficiencies of *Adams*, the Office Action cites *Ito*.

Ito discloses a system for delivering compressed stored video data by adjusting the transfer bit rate to compensate for high network load. *Ito* creates a video data index that describes parts which are selected from among compressed video in order for a video server to adjust the transfer bit rate at which the compressed video data are transmitted without loss of the

[5] Applicants respectfully note that although the following response focuses its arguments on only a portion of the elements or features within claim 30, Applicants do not necessarily agree that some of the other elements or features within claim 30 are disclosed or suggested within the cited references. Accordingly, any arguments made herein should not be construed as acquiescing to what any prior art reference may disclose or suggest.

consistency. (*See, e.g.,* col. 5, ll. 24-36). Unlike the present invention, however, *Ito* avoids picture degradation. For example, as acknowledged by the Office Action, *Ito* prevents picture degradation by determining the types and numbers of pictures to be extracted for each of the plural bit rate settings in the video data index by assigning a weight to each picture that construct a GOP in accordance with the contents of the video data. (*See, e.g.,* col. 9, ll. 15-27). As such, *Ito* cannot possibly rectify those deficiencies noted above with regards to *Adams*. More specifically, *Ito* cannot possibly disclose or suggest *degrading* the image quality *based on* the *types of data and* the *client capabilities* for differentially converting said data into compressed video streams responsive to an instantaneous resource restriction. In fact, Applicants respectfully submit that because *Ito* prevents picture degradation, *Ito* "teaches away" from Applicants' claimed invention.

Recognizing some of the deficiencies in *Adams* and *Ito*, the Office Action cites *Chen*. *Chen* discloses a system for just-in-time retrieval of multimedia files over a computer networks by transmitting data packets at transmission rates determined by frame size. The Office Action relies on *Chen* as allegedly using client capabilities to determine an appropriate compression. *Chen*, however, is silent with regards to degrading image quality. Accordingly, *Chen* cannot possibly disclose or suggest degrading the image quality based on the types of data and the client capabilities for differentially converting said data into compressed video streams responsive to an instantaneous resource restriction. Noting some of the deficiencies of *Adams*, *Ito*, and *Chen*, the Office Action cites *Mussman*.

Mussman discloses a broadband video switch that performs program merging. The Office Action relies on *Mussman* as allegedly using a customer identifier to locate clients in a broadband system. Assuming that *Mussman* does what the Office Action states, however, this is not the same as degrading image quality based on the types of data *and* the client capabilities. In fact, similar to some of the other cited references noted above, *Mussman* is silent with regards to degrading image quality. Accordingly, *Mussman* does not rectify those deficiencies noted above with regard to *Adams*, *Ito*, and *Chen*.

Applicants also note that the Office Action is using impermissible hindsight reconstruction when combining reference teachings. MPEP § 2143.01 citing *In re Mills*, 916 F.2d 680, 167 USPQ2d 1430 (Fed. Cir. 1990) states that "[t]he mere fact that the references can

be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination." (Emphasis added).

Although *Adams*, *Ito*, and *Chen*, relate to adjusting bit rates or transfer rates of video data, each reference is directed toward solving a different problem. For example, *Adams* is directed toward utilizing wasted bit rate associated with constant bit rate transformation that increases picture quality where higher resolution in unnecessary. *Ito*, on the other hand, is concerned with how to adjust the bit rate of already compressed vide data without decompressing the video data. In contrast, *Chen* adjusts the data transfer rate of video based on the frame size, rather than transmission rates based on the average size of the overall video length and size. Accordingly, because each of these references is directed toward solving different problems, none of the cited references can possibly suggest combining the reference teachings in the manner suggested by the Office Action. In addition, it is unclear whether the various methods for adjusting video transmission bit rates would be complimentary or would render any of the reference unsuitable for their intended purposes. At the very least, such combination in the manner suggested by the Office Action would indeed require undue experimentation.

In addition, Applicants respectfully note that *Mussman* is not even concerned with adjusting compression or data transfer rates, but rather is directed toward being able to bridge or merge video from one receiver to another within a single customer location. As such, *Mussman* cannot possibly suggest combining its teachings with that of the other reference, nor can it be said that the other bit rate transfer systems would suggest combining their teachings with that of *Mussman*. Because there is no motivation within the references themselves to combine reference teachings, and because is speculative at best whether the combination is conceivable in the manner suggested by the Office Action, it is clear that the Office Action relies on impermissible hindsight reconstruction for combining reference teachings.

For at least those reasons stated above, Applicants respectfully submit that the Office Action has failed to establish a *prima facie* case of obviousness with regards to claim 30. Based on at least the foregoing reasons, therefore, Applicants respectfully submit that the cited art fails to anticipate or make obvious Applicants' invention, as claimed, for example, in independent claims 30. Applicants note for the record that the other rejections and assertions of record with respect to the independent and dependent claims are now moot, and therefore need not be addressed individually. Accordingly, Applicants do not acquiesce to any assertions in the Office

Action that are not specifically addressed above, and hereby reserve the right to challenge those assertions in the future, including (but not limited to) any official notice taken by the Examiner, if necessary or desired.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance, and notice to this effect is earnestly solicited. Should any question arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that he be contacted at +1.801.533.9800.

Dated this 31st day of August, 2005.

Respectfully submitted,

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